4 ANSWER 15 OF 30 CAPLUS COPYRIGHT 2003 ACS
AN 2002:466681 CAPLUS
DN 137:40294
TI Anisotropic plasma etching of polymer insulating layers for semiconductor devices
IN Maex, Karen; Donaton, Ricardo A.; Baklanov, Michael; Vanhaelemeersch, Serge
PA Belg.
SO U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of U.S. Ser. No. 530,069.
CODEN: USXXCO
DT Patent
LA English
IC ICM H01L021-302
ICS H01L021-461
NCL 438706000
CC 76-3 (Electric Phenomena)
Section cross-reference(s): 38
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002076935	A1	20020620	US 2001-967848	20010928
	EP 911697	A2	19990428	EP 1998-870111	19980518
	EP 911697	A3	19990915		
	WO 9921217	A1	19990429	WO 1998-BE159	19981022
	US 2001026956	A1	20011004	US 2001-844959	20010427
PRAI	US 1997-63487P	P	19971022		
	US 1998-74524P	P	19980212		
	EP 1998-870111	A	19980518		
	WO 1998-BE159	W	19981022		
	US 2000-530069	A2	20000703		
	US 2000-236569P	P	20000929		
	US 1998-85691	A3	19980527		

May 27, 1998 priority date

AB A method for anisotropic plasma etching of polymer insulating layers to create submicron openings is disclosed. According to this method at least one opening is created in an org.-contg. insulating layer formed on a substrate. These openings are created substantially without depositing etch residues by plasma etching said insulating layer in a reaction chamber contg. a gaseous mixt. which is composed such that the plasma etching is highly anisotropic. Examples of such gaseous mixts. are a gaseous mixt. comprising a F-contg. gas and an inert gas, or a gaseous mixt. comprising an O-contg. gas and an inert gas, or a gaseous mixt. comprising HBr and an additive. The plasma etching of the org.-contg. insulating layer can be performed using a patterned bilayer as an etch mask, said bilayer comprising a hard mask layer, being formed on said org.-contg. insulating layer, and a resist layer being formed on said hard mask layer. A method is disclosed for forming a layer, protecting exposed surfaces of low-k dielecs. More particularly the method comprises the steps of sealing exposed surfaces of a, preferably porous, low-k dielec., by forming a protective layer on exposed surfaces during or after the step of patterning openings in the porous dielec. layers. Preferably this protective layer is formed by a N2/O2 plasma treatment of the exposed surfaces.
IT Contact holes
Dielectric films

IT Films
(porous; anisotropic plasma etching of polymer insulating layers for semiconductor devices)
IT **334490-97-0**, Black diamond
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(anisotropic plasma etching of polymer insulating layers for semiconductor devices)
RN 334490-97-0 CAPLUS
CN Black Diamond (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***